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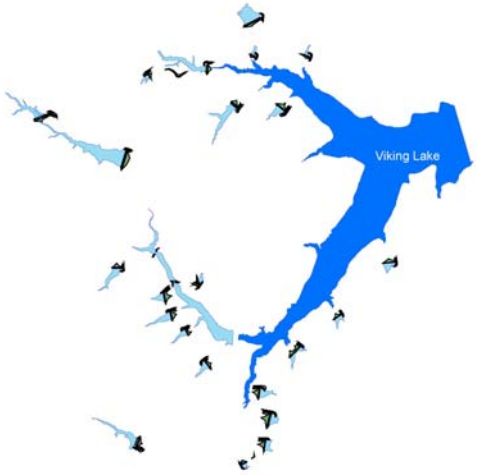
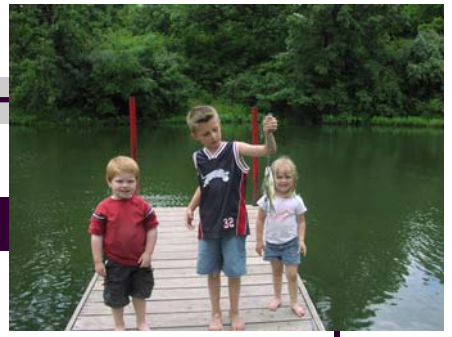
# Viking Lake Water Quality Project

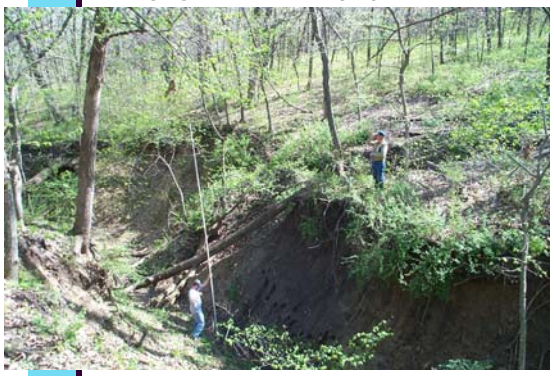



NRCS Natural Resources Conservation Service

# Water Quality?



Many people are probably wondering why we are doing a water quality project at Viking Lake. Viking has always been a gorgeous park in which to spend your weekends camping, hiking, boating, fishing, and swimming. With the recent additions of a full service restaurant, shelter house, and fully renovated campgrounds; Viking Lake has quickly gained a reputation as one of the nicest state parks in Iowa. But like many of southwest Iowa's lakes, Viking is starting to show its age. In 2007 Viking Lake will celebrate its 50th birthday. Just like human beings; lakes are living, breathing organisms which age over time. One of the first signs of aging in humans is grey hair. For lakes it is often green water.



So what causes the green water? Over the past 50 years many of the gullies in the watershed have grown deeper and worked their way back into the steep hills surrounding the lake. So how does this happen? ***GULLY EROSION***!!!!!!! Viking Lake State Park is full of 15 foot deep gullies which have been eating away at the park's soils for years. So where did all of that soil go? You guessed it, deposited in the lake. While Viking is still considered to be a deep lake at over 40 feet deep in the middle, the two main fingers and many small coves leading into the lake have filled with sediment. The result is shallow water. Shallow water alone is not a bad thing. In healthy aquatic ecosystems shallow water plays a crucial role in that it is used as spawning grounds by many species of fish. Sedimentation can and does however destroy these spawning grounds by covering up egg filled spawning beds with silt. When this situation is combined with nutrients from the watershed and a calm, hot summer day; the stage is set for an algae bloom.

Why are algal blooms a bad thing? While algae are not necessarily harmful to humans, they can disrupt an aquatic ecosystem by crowding out other more desired species of aquatic plants. Dense colonies of algae can shade out other types of plants that depend on sunlight to survive. Dead decaying plants cause oxygen depletion in the water, which can kill many desirable, oxygen dependant, fish species. This allows less desirable species such as carp and yellow bass to thrive. Carp speed along the process by feeding on desirable aquatic plants, churning up the bottom of the lake, which releases even more sediment and nutrients into the water, which makes the situation even worse. The resulting reduction in water clarity makes the lake look bad, makes swimming much less enjoyable, and really hurts fish populations. . This is why having clean water is the most important part of a lake------everything depends upon it!

That is why this summer and fall Viking Lake is going to undergo a serious makeover in an effort make the lake a healthy aquatic ecosystem once again. Twenty two sediment control structures, better known as ponds, will be built around the lake. These structures are excellent for water quality in that they trap 90% of all sediment and nutrients which flow into them. After Labor Day DNR Fisheries is going to completely drain the lake. While drained, DNR is going to rid the lake of all yellow bass and carp. Without yellow bass and carp, the lake stands a much better chance of maintaining a healthy aquatic ecosystem. Islands will be constructed in many of the coves and fingers of the lake. This will deepen the water in these areas, cooling the water and leaving much less chance for algae blooms. After all is said and done, Viking should be an excellent recreational destination once again.

On June 21st DNR Engineering and Realty held their bid opening for the twenty- two sediment control structures. Roger Stewart from Stanton, Ia. was the low bidder with a bid of $209,489.95. Roger is no stranger to Water Quality Projects in Southwest Iowa. Two years ago Roger and his crew were the contractors for a water quality project at the Lake of 3 Fires in Taylor County. The lake has since filled with water and is crystal clear.

July 21st Roger and his crew started working on the east side of the lake. The project's contract calls for all twenty-two structures to be completed by December 1st. If the weather is kind, they should have no trouble finishing the project by mid October.